

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

5 Listing of Claims:

Claims 1-21 (Cancelled)

Claim 22 (New): A method of frame synchronization for converting a source frame to a destination frame, the source frame being received at a first frame rate and the destination frame being outputted at a second frame rate, the method comprising the following steps:

10 buffering at least a part of the source frame;
determining whether a predetermined condition is satisfied;
if the predetermined condition is satisfied, converting the source frame to the destination frame with a first amount of pixel data such that the first frame rate is different from the second frame rate; and

15 if the predetermined condition is dissatisfied, converting the source frame to the destination frame with a second amount of pixel data such that the first frame rate is substantially the same as the second frame rate;

20 wherein the first amount is different from the second amount.

Claim 23 (New): The method of claim 22, wherein the step of converting the source frame to the destination frame with the first amount of pixel data further comprises adjusting a time for generating a vertical sync signal such that the first frame rate is substantially the same as the second frame rate, and the step of converting the source frame to the destination frame with the second amount of pixel data further comprises keeping the time for generating the vertical sync signal unchanged such that the first frame rate is substantially the same as the second frame rate.

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Claim 24 (New): The method of claim 22, wherein the predetermined condition is a time interval between a last horizontal sync signal and a vertical sync signal shorter than a time limit, and the first amount is more than the second amount if the predetermined condition is satisfied.

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Claim 25 (New): The method of claim 22, wherein the predetermined condition is a number of pixel data for constructing the destination frame being an odd number, and the first amount is more than the second amount if the predetermined condition is satisfied.

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Claim 26 (New): The method of claim 22, wherein the predetermined condition is an overflow condition, and the first amount is fewer than the second amount if the predetermined condition is satisfied.

15 Claim 27 (New): The method of claim 26, wherein the step of determining whether the predetermined condition is satisfied comprises:
determining whether the amount of the source frame being buffered is over a maximum level.

20 Claim 28 (New): The method of claim 22, wherein the predetermined condition is an underflow condition, and the first amount is more than the second amount if the predetermined condition is satisfied.

25 Claim 29 (New): The method of claim 28, wherein the step of determining whether the predetermined condition is satisfied comprises:
determining whether the amount of the source frame being buffered is under a minimum level.

Claim 30 (New): The method of claim 22, wherein the first amount of pixel data

comprises a third amount of invisible porch signals, the second amount of pixel data comprises a fourth amount of invisible porch signals, and the third amount is different from the fourth amount.

- 5 Claim 31 (New): A method of frame synchronization for converting a source frame to a destination frame, the source frame being received at a first frame rate and the destination frame being outputted at a second frame rate, the destination frame comprising a plurality of horizontal lines, the method comprising the following steps:
- 10 buffering at least a part of the source frame;
determining whether a predetermined condition is satisfied; and
if the predetermined condition is satisfied, generating a first horizontal line of the horizontal lines corresponding to a first horizontal sync period and generating a second horizontal line of the horizontal lines corresponding to a second horizontal
- 15 sync period;
wherein the first horizontal sync period is different from the second horizontal sync period.

- 20 Claim 32 (New): The method of claim 31, wherein the first horizontal line comprises a first amount of pixel data, the second horizontal line comprises a second amount of pixel data, and the first amount is different from the second amount.

- Claim 33 (New): The method of claim 32, wherein the first amount of pixel data comprises a third amount of invisible porch signals, the second amount of pixel data
- 25 comprises a fourth amount of invisible porch signals, and the third amount is different from the fourth amount.

- Claim 34 (New): The method of claim 31, wherein the first frame rate is the same as the second frame rate.

Claim 35 (New): The method of claim 31, wherein the predetermined condition is a time interval between a last horizontal sync signal and a vertical sync signal shorter than a time limit.

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Claim 36 (New): An apparatus for converting a source frame to a destination frame, the source frame being received at a first frame rate and the destination frame being output at a second frame rate, the apparatus comprising:
a buffer for storing at least a part of the source frame; and
10 a converter for determining whether a predetermined condition is satisfied, the converter converting the source frame to the destination frame with a first amount of pixel data if the predetermined condition is satisfied such that the first frame rate is different from the second frame rate, and converting the source frame to the destination frame with a second amount of pixel data if the predetermined
15 condition is dissatisfied such that the first frame rate is substantially the same as the second frame rate;
wherein the first amount is different from the second amount.

Claim 37 (New): The apparatus of claim 36, wherein the converter adjust a time for
20 generating a vertical sync signal if the predetermined condition is satisfied such that the first frame rate is different from the second frame rate, and the converter keeps the time for generating the vertical sync signal unchanged if the predetermined condition is dissatisfied such that the first frame rate is substantially the same as the second frame rate.

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Claim 38 (New): The apparatus of claim 36, wherein the predetermined condition is a time interval between a last horizontal sync signal and a vertical sync signal shorter than a time limit, and the first amount is more than the second amount if the predetermined condition is satisfied.

5 Claim 39 (New): The apparatus of claim 36, wherein the predetermined condition is a number of pixel data for constructing the destination frame being an odd number, and the first amount is more than the second amount if the predetermined condition is satisfied.

10 Claim 40 (New): The apparatus of claim 36, wherein the predetermined condition is an overflow condition happened to the buffer, and the first amount is fewer than the second amount if the predetermined condition is satisfied.

15 Claim 41 (New): The method of claim 40, wherein the converter determines whether the amount of the source frame being buffered is over a maximum level.

20 Claim 42 (New): The apparatus of claim 36, wherein the predetermined condition is an underflow condition happened to the buffer, and the first amount is more than the second amount if the predetermined condition is satisfied.

25 Claim 43 (New): The method of claim 42, wherein the converter determines whether the amount of the source frame being buffered is under a maximum level.

30 Claim 44 (New): The apparatus of claim 36, wherein the first amount of pixel data comprises a third amount of invisible porch signals, the second amount of pixel data comprises a fourth amount of invisible porch signals, and the third amount is different from the fourth amount.

35 Claim 45 (New): The apparatus of claim 36, wherein the buffer is a first-in-first-out (FIFO) buffer.

40 Claim 46 (New): An apparatus for converting a source frame to a destination frame, the source frame being received at a first frame rate and the destination frame being

output at a second frame rate, the destination frame comprising a plurality of horizontal lines, the apparatus comprising:
a buffer for storing at least a part of the source frame; and
a converter coupled to the buffer for determining whether a predetermined condition
5 is satisfied, the converter generating a first horizontal line of the horizontal lines corresponding to a first horizontal sync period and a second horizontal line of the horizontal lines corresponding to a second horizontal sync period if the predetermined condition is satisfied;
wherein the first horizontal sync period is different from the second horizontal sync
10 period.

Claim 47 (New): The apparatus of claim 46, wherein the first horizontal line comprises a first amount of pixel data, the second horizontal line comprises a second amount of pixel data, and the first amount is different from the second amount.

Claim 48 (New): The method of claim 47, wherein the first amount of pixel data comprises a third amount of invisible porch signals, the second amount of pixel data comprises a fourth amount of invisible porch signals, and the third amount is different from the fourth amount.

Claim 49 (New): The method of claim 46, wherein the first frame rate is the same as the second frame rate.

Claim 50 (New): The method of claim 46, wherein the predetermined condition is a time interval between a last horizontal sync signal and a vertical sync signal shorter than a time limit.

Claim 51 (New): The apparatus of claim 46, wherein the buffer is a first-in-first-out (FIFO) buffer.